

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A stackable network unit including:
a multiplicity of ports for receiving and forwarding data packets and at least one cascade port for the transmission of data packets on a data path to and from other units in a stack; and

control logic for forwarding control messages to and receiving control messages from the next ~~succeeding~~previous and the next following units in the stack by way of a respective half-duplex control link separate from said data path;

wherein the control logic is responsive to the absence of control messages from one or other of the control links to redirect control data intended for that control link to the other control link.

2. (Currently Amended) ~~A~~The stackable network unit according to claim 1 wherein the control ~~data identifies~~messages identify which units are active in said stack.

3. (Currently Amended) ~~A~~The stackable network unit according to claim 1 wherein the network unit includes means responsive to control data from said control messages for controlling the forwarding of data packets from the cascade port.

4. (Currently Amended) A stackable network unit including:

a multiplicity of ports for receiving and forwarding data packets; and

at least two cascade ports for the transmission of data packets, on a data path to and from other units in a stack;

control logic for forwarding control messages to and receiving on a control path separate from said data path, control messages from the next ~~succeeding~~previous and the next following units in the stack, said control messages including operational status information; and

a switching engine for directing data packets received at a port of said unit to at least one other port of said unit;

wherein the unit is responsive to control data from said control messages to control the switching engine to redirect data packets otherwise intended for one cascade port to a different cascade port.

5. (Currently Amended) ~~A~~The stackable network unit according to claim 4 wherein the control logic is responsive to the absence of control messages from an adjacent unit to loop back control data intended for that unit.

6. (Currently Amended) ~~A~~The stackable network unit according to claim 4 wherein the unit is responsive to particular control data from said control messages for inhibiting the operation of the switching engine such that it does not redirect data packets.

7. (Currently Amended) ~~A~~The stackable network unit according to claim 4 wherein the unit includes a processor which has recourse to registers which store the control data.

8. (Currently Amended) A control device for transmitting and receiving control frames of status and control data for a cascaded stack of network units coupled by a data path for addressed data packets, comprising:

means for transmitting control frames and receiving control frames at a first port, said control frames each including control data;

means for receiving and transmitting control frames at a second port, said first and second ports defining a control path separate from said data path;

means for detecting absence of valid control frames at the first port to cause loop-back of control data intended for the first port to provide control frames forwarded from the second port; and

means for detecting absence of valid control frames at the second port to cause loop-back of control data intended for the second port to provide control frames forwarded from said first port.

9. (Currently Amended) ~~A~~The control device according to claim 8 and further comprising:

first storage means for storing data from control frames receiving at said second port and for providing data for control frames forwarded from the first port; and

second storage means for storing control data from control frames receiving at said first port and for providing control data for control frames forwarded from said second port; wherein

the loop-back of control data intended for the first port extends from the first storage means to the second storage means and the loop-back of control data intended for the second port extends from the second storage means to the first storage means.

10. (Currently Amended) A The control device according to claim 9 wherein:
the first storage means comprises a first set of storage registers for data from control frames received at the second port and a second set of storage registers for providing control data for control frames forwarded from the first port;
the second storage means comprises a third set of registers for control data received from control frames at the first port; and

wherein the second set of registers and the first port are selectively coupled to the third set of storage registers and the third set of storage registers and the second port are selectively coupled to the first set of storage registers.

11. (Currently Amended) A stack of network units comprising:
a plurality of network units, each network unit including a multiplicity of ports including at least one cascade port for receiving and forwarding addressed data packets and a switching engine responsive to address data within data packets to direct data packets received by the network unit to at least one of the ports;

at least one cascade data path for the transmission of ~~address~~addressed data packets between the network units, including at least one cascade port on each network unit and communication links which couple a cascade port of one network unit to a cascade port of the next network unit;

a control device for each network unit, these control devices providing a control path separate from said data path for the transmission of control frames including control data between the network units, each control device comprising means for transmitting control frames to the control device of the adjacent succeeding network unit and receiving control frames therefrom and means for receiving control frames from the control device of the adjacent previous network unit and transmitting control frames thereto and means responsive to the absence of control frames from one or other of the adjacent network units to cause loop-back of control data instead of forwarding control frames to the respective adjacent network unit; and

means responsive to control data from said control frames to alter the operation of the switching engine in respect of directing data packets to the cascade port.

12. (Currently Amended) ~~A~~The stack according to claim 11 wherein each network unit has at least two cascade ports and each unit is responsive to control data from said control messages to control the switching engine to redirect data packets otherwise intended for one cascade port of the network unit to a different cascade port of the same network unit.

Add new claims 13 and 14 as follows:

13. (New) A stackable network unit including:

a multiplicity of ports for receiving and forwarding addressed data packets,
including at least two cascade ports for the transmission of addressed data packets on a
data path to and from other units in a stack;

a switching engine for directing addressed data packets to at least one of said ports
in accordance with address data in said addressed data packets;

control logic for forwarding control messages to, by way of a respective associated
control link separate from said data path, and for receiving control messages from, by
way of said respective control link, units coupled to said cascade ports, said control
messages each including control data;

wherein said control logic is responsive to the absence of control messages from a
first of the control links:

- (a) to redirect control data intended for that control link to a second of the
control links; and
- (b) to control said switching engine to prevent the forwarding of packets to the
cascade port associated with said first control link.

14. (New) The stackable network unit according to claim 13 wherein the
control messages identify which units are active in said stack.